



THOMAS G. NEWMAN,
EDITOR.

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Another Union Convention is to be held in Albany, N. Y., next January. See the notice on page 699. Let there be a general rally of the bee-keepers of New York at this union meeting.

W. Z. Hutchinson has sustained a loss by fire. We are sorry to learn that on Oct. 25, the store, hotel, post-office, and railroad depot at Rogersville, Mich., were consumed by fire. In the depot Mr. H. had stored 1,000 pounds of his choicest comb honey, preparatory to shipment. It was all consumed; and it is quite a loss for our friend, who is so well known to our readers, as a correspondent.

Mr. Edward R. Newcomb, of Pleasant Valley, N. Y., had an "exhibit" and "apiary tent" at the Fair, of which the Poughkeepsie News-Press remarks as follows :

The apairy tent of E. R. Newcomb, of Pleasant Valley, was filled with visitors all through the day. Mr. Newcomb entertained his callers by explaining to them the habits of bees, and method of preparing the comb and honey. His exhibits of bees, comb honey and extracted honey are very fine.

Mr. Newcomb has sent a photograph of the tent containing the exhibits to this office, which is placed in our Museum.

These names were omitted by the secretary, through an oversight, in the list of members at Indianapolis, on page 669 :

Rev. W. F. Clarke, Guelph, Ont.
C. E. Parks, Watertown, Wis.
O. O. Poppleton, Williamsport, Iowa.
Arthur Todd, Philadelphia, Pa.
Stewart Nichols, Sugar Creek, Ind.
Madison Talbert, Morristown, Ind.
John Clark, Liberty, Ind.
A. Leedy, Andrew, Ind.
Geo. J. Frey, Lebanon, Ind.
A. Cox, Whitelock, Ind.

Mucci & Bro., of Kentucky, received a queen from Italy, by mail, on Sept. 27, 1886, which was only 13 days in transit. She now has 3 frames full of brood, and they say that it was the first queen-bee to cross the Atlantic in the mails. Several have been sent across by mail, but which was first we are now unable to say. One of the first was taken from the mail at New York, custom house fees collected, and then forwarded by express to the consignee. This was of course an outrage, but we know of no inexpensive redress, as we explained to the consignee, who complained to us at the time.

Where Honey Comes From.—It has been known for ages that honey is a vegetable product—that it is not "made by bees," as many ignorantly express it, but gathered from the flowers! Now comes a theorist who asserts the opposite in the *Rural Home* for Oct. 2, 1886, published in Rochester, N. Y., a marked copy of which was sent to us by Mr. W. E. Peterman, of Trappe, Pa. He says that "honey is not secreted by the flowers, but is held in solution in the atmosphere, and under favoring conditions is attracted to and condensed by flowers and leaves having affinity for it."

The author of this statement is W. M. Evans; but there is some hope for him, as he subsequently makes this statement concerning honey-dew: "Before I came to Virginia I did not believe in honey-dew; now belief is knowledge." He may, therefore, learn something else. He then adds :

Last year, after the clover and all our honey flowers had dried up, and before fall flowers blossomed, my bees gathered 2,000 pounds from honey-dew on pines. You could see it plainly in the morning in small, white drops. In color and flavor it is equal to white clover, and in body is heavier.

We are aware that there are different kinds of honey-dew, and some may be of very passable quality, but most of it is totally unfit for use. That Mr. Evans did not believe in its existence until recently, proves that his knowledge is very limited, and he should be very careful in making assertions in public print, so utterly unfounded as the first extract we have quoted.

If honey is not secreted by the flowers, how does Mr. Evans account for the fact that in "new country," before so much land is brought under cultivation, where wild flowers abound, so much more honey can be obtained than after the same lands have been cultivated? If "the honey were held in solution in the atmosphere," cultivation which destroys the wild flowers should not make so much difference!

Again, how comes it that the honey from basswood, white clover, buckwheat, etc., so much differ in color and taste if it is held in solution in the atmosphere, and is simply "attracted to and condensed by the flowers and leaves"? If his theory were true would it not all be of the same color and taste?

Mr. Evans than rattles off the "Wiley lie" about filling combs and glucose, and selling that which he calls "Devil's honey" for the pure article, in lots of 10,000 pounds, and denominated "apple blossom honey" in the New York market. It is all bosh! He is only adding to Wiley's nefarious lie, by "drawing on imagination for facts," and then swearing they are true statements of the case!! He then gets excited and writes these frenzied words in conclusion :

The hells of adultery, adulteration, bribery, corruption, and all kinds of human cussedness have broken loose and taken hold of all classes!

We think that it is the worst kind of "cussedness" to lie about a pursuit and endeavor to ruin it by such stupidity and unreasonable assertions as Mr. Evans indulges in!

Mr. O. O. Poppleton's honey crop for this year amounts to 15,500 pounds, and is mostly extracted honey—as yet all of it is unsold. In May he had 141 colonies, which have increased to 233 now.

That Lawsuit against Mr. C. C. Richardson, of Tipton, Ind., for damage alleged to be done by his bees to a neighbor, will come up in the November term of court, on appeal from a Justice's Court.

At the Indianapolis Convention another neighbor of his made some assertions about the Union not having given Mr. R. any assurance of help in defending the suit. Not remembering the details of so much correspondence as of necessity he has in such matters, the Manager promised the Convention that he would examine the records in his office, on his return, and make a public statement of the case. Upon looking the matter up, he found that he had written to Mr. Richardson on Aug. 4, 1886, requesting him to make the defense as thorough as possible, assuring him that the Union would help him to a reasonable amount. To this Mr. R. replied that he had permitted the case to go by default in the Justice's Court in order to take an appeal to a higher court. The Manager, on Aug. 23, requested him to ascertain from his attorney the probable cost of the suit including the appeal; and again assured him that the Union would render him all the aid in its power to defend the case.

After ascertaining these facts in the case, the Manager then wrote to Mr. R. stating what had been said by a member at the Indianapolis Convention, and asked: "Did he speak thus with any authority from you?" To this Mr. R. replies as follows, by return mail:

I hasten to answer your inquiry, "Did he speak thus with any authority from you?" with a positive denial. He had no grounds for making the statement on any authority.... My case will come up in the November term.... The costs of the suit will amount to about \$40. I stand by the Union, and whatever help can be rendered by it will be satisfactory. C. C. RICHARDSON.

Probably the person who made the remarks referred to at the Convention (his name is forgotten), intended no wrong, but either his memory was defective, or he failed to comprehend the facts in the case.

The Manager has copies of all his official letters, which are not a few, but are always accessible to any member of the Union who may desire to review them, in any application for defense or other official act. This is done not only for convenience but for proof, in cases like the one under consideration.

Premium Worth Having.—The New York World and the AMERICAN BEE JOURNAL (both weekly) will be sent for one year to any address in North America for \$1.00. And in addition PRESENT to every such CLUB SUBSCRIBER a "History of the United States," containing 320 pages and 22 fine engravings, bound in leather and gilt.

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It is arranged chronologically by years, from 1492 to 1885. Every event is narrated in the order of its date. These are not confined, as in other works, to political matters, but embrace every branch of human action.

This premium is worth the whole of the money sent for both periodicals, and should induce thousands to subscribe, and thus get two unrivaled weeklies for nothing.



AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Preparing Bees for Winter.

Query, No. 327.—My bees are all in the style of hives mentioned on page 361. I have been thinking of putting them away for the winter, with first a thickness of muslin, and then two or three thicknesses of quilts over the frames, with enough weights around outside to keep them in place without boards. Will it be the best way? I winter my bees in a cellar.—J., New York.

With me, bees winter well in that way if the cellar is all right.—G. M. DOOLITTLE.

I have tried the equivalent of this for years with almost absolute success. Of course the cellar must be right.—A. J. COOK.

In a cellar we put nothing over the frames except the enameled cloth slightly opened. Quilts cannot injure, however.—DADANT & SON.

If the cellar is all right, I think they might winter well.—C. C. MILLER.

I doubt if such is the best way, but if your cellar keeps at a temperature of about 50°, I think your plan will give good results.—JAMES HEDDON.

That depends upon the temperature. If it ranges from 45° to 50°, there should be free upward ventilation; but if the range is below 45°, I prefer a thin, unpainted board with bee-space allowing no free upward ventilation. In the latter case I should give free bottom ventilation.—G. L. TINKER.

Wintering Bees in a Straw-Stack.

Query, No. 328.—1. How would it do to winter bees in a straw-stack? 2. How large a stack would it take to keep the temperature above freezing? 3. Would there need be any provision for ventilation?—H. A. C., Illinois.

I consider it impracticable to winter bees in a straw-stack, and I would not advise any one to attempt it.—G. L. TINKER.

I cannot say how such an experiment would terminate in the dry cold air of the North, but dampness would accumulate in the hives under such conditions, in this climate, and ruin the combs, and of course the bees with them.—G. W. DEMAREE.

1 and 2. That depends much upon your latitude and the severity of the winter. 3. Bees must have air in some way.—C. C. MILLER.

1. Try it and report. 2. Frost would eventually reach the centre of the largest stack unless kept warm by the ground or bees. 3. I should say not.—G. M. DOOLITTLE.

1. If it does not freeze in the centre of the stack it might answer. 3. I do not think any special ventilation would be needed.—W. Z. HUTCHINSON.

The same objection occurs that arises with burying bees. You could not regulate temperature, nor know whether it was right or wrong. I should not dare to submit bees to such an unknown and unknowable condition.—A. J. COOK.

A friend, a few years ago, put a small stack of corn stalks around each hive, and thought he had just "done it," and he had, for he lost every colony so treated. When taken out, they were a wet, moldy mass.—H. D. CUTTING.

I think that bees would winter well protected by a straw-stack, if care was taken to prevent excess of moisture within the hives. My impression is, as I have frequently stated, that cold of itself does not kill our bees; but that they are destroyed by excess of moisture which freezes and prevents the cluster from getting at its stores, or else causes the stores to ferment and thus become dangerous.—J. E. POND, JR.

I believe that bees would gain much protection from being in the centre of a large straw-stack. Turn a board over the front of the hives, and that will insure all the ventilation I should care for. Guard against mice and rats. Have the hives rest on a foot of straw. The stack should be well "stacked," so as to turn water.—JAMES HEDDON.

Boneset Honey for Winter Stores.

Query, No. 329.—Will bees winter well on honey that is gathered from boneset, when the same is nicely capped over? Or would it be better to extract the boneset honey out of the combs and feed the bees granulated sugar syrup, or white clover extracted honey to winter on?—G. H. D.

I should try the boneset honey if I had it.—G. M. DOOLITTLE.

Yes, winter them on boneset honey if capped.—DADANT & SON.

If well cured, boneset honey is as good as any for wintering.—J. P. H. BROWN.

I do not know but I should say at a guess that boneset honey would be all right.—C. C. MILLER.

I have had no experience with boneset honey, but from what I have read, I should prefer sugar syrup or good honey.—H. D. CUTTING.

I have no fear of such honey. Two years ago I used such honey exclusively in several colonies, and all win-

tered perfectly. Honey from autumn flowers I fully believe just as good as that from early bloom.—A. J. COOK.

I know no reason why boneset honey is not as good for winter stores as is any fall honey. I have wintered bees successfully upon boneset honey.—W. Z. HUTCHINSON.

I should consider well ripened boneset honey, well capped in the combs, superior to the syrup of granulated sugar for wintering bees.—G. L. TINKER.

I prefer properly prepared cane-sugar syrup to any honey, but I have had as good results from boneset, and honey from other fall flowers, as from clover or basswood honey. I should depend upon the boneset honey as soon as any.—JAMES HEDDON.

If the honey is well ripened, and the hive kept well ventilated and free from excessive moisture, there is no reason why the bees should not winter well on boneset honey. I prefer natural stores; others prefer sugar syrup in any case, no matter from what source the honey comes. Sugar syrup has proved safe for winter stores; so has honey of all kinds. The advocates of the various theories will each stick to his own so long as his bees winter well.—J. E. POND, JR.

I see no reason why they would not. Beyond question they would winter all right on such honey here. Do not feed sugar syrup to bees if you can help it, for it is almost impossible to feed syrup even for stimulating purposes without getting some of it into the honey.—G. W. DEMAREE.

Laying-Room for the Queen.

Query, No. 330.—I work all my bees in the Simplicity hive for extracted honey. Will the average queen lay as many eggs if she is confined to the lower story with perforated zinc, as she would if she had the run of the whole hive of 20 or 30 frames?—H. L.

No.—G. L. TINKER.

No.—H. D. CUTTING.

No, according to my experience.—G. M. DOOLITTLE.

Not if she is a very prolific queen.—DADANT & SON.

I think she will lay just as many.—J. P. H. BROWN.

If confined to the lower story, the bees might take a whim to crowd her, but I think generally not. At any rate I would risk it.—C. C. MILLER.

Just as much. It is much better to keep her from the frames used for extracting.—A. J. COOK.

I think not, but I can get the greatest dividend upon the capital and labor employed by using the excluding honey-board, and keeping the queen always in the brood-chamber.—JAMES HEDDON.

Perhaps not quite, but it will be much more convenient and profitable to have the brood in one part of the hive, and the honey in another; and I see no advantage in securing a large

number of eggs from one queen. Queens are cheap compared with the cost of combs.—W. Z. HUTCHINSON.

Yes! In this matter I "speak as one having authority," for I have tested the point thoroughly. The lower story, however, must be kept extracted, so that the storage will not drive the queen out. Give her all the room she needs. Ten Simplicity-Langstroth frames will be found as many as the best of queens can keep filled, if the whole cell-space is given her to occupy.—J. E. POND, JR.

"Simplicity hive" is very indefinite, as a description of a hive, with the "Langstroth" left off. If the hive you use has a brood-chamber as large as that of the standard Langstroth, the average queen will find as much room as she ought to have when confined to the brood-chamber with a queen-excluder. In my opinion it does not pay to let a queen scatter her brood; it is better to give her plenty of room in the "queen's chamber."—G. W. DEMAREE.

Peculiar Actions of Worker-Bees.

Query, No. 331.—Doubtless you have noticed worker bees collected on the alighting-board or front of the hive, moving their bodies backward and forward as though they were busily polishing their mandibles on the wood. Can you give any clue to the cause of their thus acting, or the purpose to be served by these movements.—Ky.

No.—C. C. MILLER.

No.—H. D. CUTTING.

I cannot.—W. Z. HUTCHINSON.

I should like a correct reply to that question myself.—G. M. DOOLITTLE.

It looks as though they were cleaning the floor.—DADANT & SON.

At such times they are "knights" of idleness—no honey to gather. Instead of "polishing" their "mandibles" they are using them to "plane" their alighting-boards and to "gnaw" their entrance larger.—J. P. H. BROWN.

This appears to be a marked trait of black bees. Syrio-Albino bees are rarely seen to do it, and then but very few. They are certainly idlers, for the movements described subserve no useful purpose.—G. L. TINKER.

I have had these peculiar movements on the part of worker-bees under observation for several years past. I sometimes notice hundreds of them stationed on the alighting-board or front of the hive, with their wings slightly elevated, and their bodies systematically moving backward and forward. I have progressed no further than this, viz: These movements are only seen at such times as there has been a cessation of brood, as after a swarm has issued, or a queen has been introduced, and then generally about the time the worker progeny begins to hatch. I would like to know more about it.—G. W. DEMAREE.



Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, at the time of the year may require.

This mark (O) indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ♂ east; ♂ west; and this ♂ northeast; ♀ northwest; ♂ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Some Observations in Bee-Keeping.

G. M. DOOLITTLE.

Some items of interest to me have come to my notice the past season, and thinking that perhaps the same might not be uninteresting to the readers of the BEE JOURNAL, I will here speak of them. The first was this: During the last of May and the first of June we had a bad spell of weather for bees, inasmuch as it was cool, cloudy, windy and rainy the larger part of the time. As the bees were short of stores, I had to resort to feeding.

Before commencing to feed I had been equalizing stores, hoping that there was honey enough in the yard to supply all through the honey dearth we were then having, if it was properly apportioned to each colony. In doing this work I noticed that nearly all the brood in the hives was in the shape of eggs and sealed brood. As the sealed brood hatched out, eggs were deposited in the cells, till there came a time that there was little else in any of the colonies beside eggs, in the brood line. These eggs the bees would not or did not hatch; or perhaps I might say the bees prevented their hatching, or else removed them from the cells just before they should hatch, and the queen deposited more eggs in the cells again. Of one thing I was certain, the combs were well supplied with eggs all this time, yet scarcely a larva was to be found. Feeding seemed to make little difference with them, and the reason I especially noticed it, and tried to coax the bees to get those eggs into larvae, was that these eggs were to become the bees for my basswood harvest, and unless I had such bees I could have no promise of basswood honey. So I watched them day after day till it came warm, fine bee-weather again, when to my surprise the barren combs were teeming with little larvae in less than three days.

I wish Prof. Cook, or some other scientist, would tell us how the bees kept those eggs day after day, not allowing them to hatch, and then when they wished larvae, hatched nearly all the eggs in the hive in a day or two. Without my stopping to explain the why and wherefore, it will

be seen that I believe that the eggs were preserved for a time, rather than that the bees kept destroying them as they were about to hatch, and the queen laying fresh eggs. I could explain why I think the same eggs were in the hive for two to three weeks, but it would be so long that it would cut out other matter which I wish to present.

After much careful observation I was led to believe that a little chyme was placed on every egg at the time that the bees wished it to hatch, and so long as this chyme was withheld the eggs were preserved. One thing was certain, I saw eggs with chyme on them, and at the base of the cells about them, which cells and eggs was marked, and after the lapse of from one to two hours the eggs were gone and larvae had taken their place. This same thing I have also noticed with eggs in queen-cells.

To prove the matter farther, I placed a wire-cloth cage over $\frac{1}{4}$ of a comb of eggs $2\frac{1}{2}$ days old, and in 4 days I looked to see if the eggs were there intact, but the bees had gnawed under the cage so as to get in en masse, hence I found nothing but little larvae, and my experiment was in vain. Not having the time at my command to follow the matter up, I am still in the dark, and wish the help of the sisters and brethren in this matter. Oh! how I do wish, at times, that I was a scientist, but I am only a kind of a practical clodhopper. Well, it would not be best for all of us to be scientists, so I will be content with my lot.

Mr. A. I. Root suggests that it was for lack of pollen that the eggs were not hatched, but I think this is a mistake, for there was plenty of pollen in the hives, besides the bees had a day, or part of a day occasionally, when they brought in pollen freely.

UNITING COLONIES.

We have long heard that when uniting bees, the two colonies to be united should be moved gradually day by day, until they were both together, when they could be united without any of the bees being lost by going back to the old location. This seemed a big job to me, so this fall, as I had much of this kind of work to do, I just smoked the colony to be moved, at the entrance, pounding on top of the cover of the hive at the same time with my fist. In a moment more I put the colony on a wheelbarrow and rapidly went to the colony they were to be united with. This rapid wheeling made the bees think that their house was "coming down over their heads," and caused them to fill themselves as "full as ticks" with honey. The other colony was now treated as the first, save the wheeling, when both were immediately united by alternating frames.

Nothing was done to cause them to mark their location anew, nor was the old stand altered in any way, for the empty hive was placed back where it stood. At their next flight I saw quite a few bees about the old stands, so, to see how many would return, I placed a frame having honey

and brood, in one hive, and a frame containing only honey, in another, while the rest were left empty. In the one in which I placed brood, I had at night about a quart of bees with queen-cells being started, showing that I would have lost that many, had I not experimented farther; but that farther experiment proved that some of my former views had been hastily drawn, for I happened near the hive in which the frame of honey was placed, about one hour after placing it there, when, to my chagrin, I saw bees going out of it loaded, and I believed that robber bees were carrying off the honey.

I was about to seize the frame of honey so as to prevent a general excitement in the bee-yard, when I saw a bee catch another which was flying about the entrance, and treat it as a robber. That caused me to think, so I went immediately to the hive to which this colony had been united with, when I saw that my robber bees, as I had supposed them, were going into this hive with their loads of honey. I left them, and at night I found an empty comb in the empty hive, with no bees, and a contented hum at the entrance of the united colony, as we hear when a colony has been getting honey. In none of the other empty hives did I find any bees, and I was satisfied that all went back, even if they did hover about the old hive for an hour or so. The moral is plain without my taking time to draw it.

SELF-UNITING COLONIES.

Another observation is this: In preparing for uniting I killed some of my poor queens, so as to keep the better queen in the united colony. These queens were killed during the middle of the day, preparatory to uniting near sunset. One day after I had killed several, it began to rain so that I could not work at the bees toward evening as I had proposed. Bad weather continued for three or four days, when the sun broke out warm soon after noon. About 2 o'clock I saw a commotion in the bee-yard, and going out there I found that one of these queenless colonies was swarming out slowly (as a swarm returns where it is hived without a queen), and going into another colony which had a queen, setting up the usual satisfied hum which all bees do when a home is found. They were received kindly, so I had one colony united without any trouble.

The above is an entirely new experience with me, of having a queenless colony swarm out and go in with another; and had I not seen it, when I went to unite, I should have doubtless reported a case of robbing. As additional light, I might say that there was no brood in this hive, not even eggs, and, although I carefully watched on their next flight, not a bee went back to hover around the old hive, so I found that the bees' plan of uniting was ahead of mine after all.

Borodino, N. Y.

Pall Mall Budget.

Canadian Honey Exhibit in England.

The exhibit of the Ontario Bee-Keepers' Association, both for quantity and quality, it is probably the most remarkable exhibit of honey that has ever been displayed in this country. It has come over in charge of a deputation from the Association, who are at present on a visit to this country with a view to open the English market to the best honey in the world, as they constantly describe the article which they have on view.

It was with peculiar interest that we bade Mr. Jones welcome as he entered our office with two other representatives of the Bee-Keepers' Association to give particulars concerning bee-culture in Ontario.

moderate computation. We have 10,000 bee-keepers in Ontario, owning, on an average, 10 colonies each, or 100,000 together. The net annual profit of each hive we estimate loosely at a sovereign, although in many cases this is very largely exceeded. We reckon the yield of each hive—or colony, as we call them in Canada—to be about 30 pounds, taking good years with bad. It is very common for a colony in a good season to yield 100 pounds, and many produce 300, while on one or two occasions it has been known to produce 600 pounds, or nearly a quarter of a ton of honey in one season. Many have gone into bee-keeping as a livelihood, and follow it exclusively, as other men follow the rearing of sheep. I have eight apiaries with from 100 to 300 colonies in each. All together I have 1,000 colonies constantly on hand."



"We claim to be located in the very heart of the honey belt of the United States," he said. "It is a remarkable fact that the specific gravity and flavor of the nectar of the flowers improves as you go north, and attains its maximum in the region where while the winter is cold, the summer is warm enough to produce an abundance of flowers. That region is found by experience to lie about the latitude of the great lakes. If you draw a line from the north of Lake Superior eastward and westward until it reaches the Atlantic, and another line from Lake Erie parallel to it, you will enclose a tract of country which, in the United States and Canada, is the honey belt of the Continent; that is to say, there is more honey grown there, for gathering, than anywhere else in America. Ontario is situated, as you will see, right in the heart of this belt; and there we have established an industry which, although at the present moment but in its infancy, produces yearly a crop of honey valued at £100,000. That is a very

"How many bees do you reckon you have in each of your hives?"

"A good strong colony is from 30,000 to 40,000. Some will run as far as 60,000, but if you average them all at 30,000 you will not do badly. So that I have about 30,000,000 of bees constantly at work. The figure sounds large, but considering that the bee census returns of Ontario show a population of 3,000,000,000, my stock compared with that total is comparatively insignificant."

"What special advantages have you in Ontario beyond the United States?"

"Chiefly in the linden trees. In the honey belt of the United States there is also less clover than we have, and the lindens are scarcer. The linden crop of honey is one of the most important, for linden honey is invaluable in cases of consumption or chest complaints. Our forests are full of linden trees, and the yield of honey is enormous. If you shake the tree the honey drops upon you from above. It keeps the bees very busy all the time the linden is in flower."

"You speak of linden honey. Have you different brands of honey according to the different flowers which the bees frequent?"

"Certainly. Not of all kinds, but of three—clover honey, linden honey, and thistle or wild weed honey."

"How can you distinguish between the honey that is collected from clover, and that which is gathered from the linden trees?"

"It is very simple. Every scientific bee-keeper in Ontario uses the honey-extractor, by which the honey is expelled from the comb without injuring the cells. The comb is placed in a rapidly-rotating cylinder. The centrifugal force that is generated, forces the liquid honey through the waxy seal at the end of the cell, and the comb thus cleared of honey is replaced in the hive, and the bees at once begin to refill the emptied cells. The great point in bee-keeping, it must be remembered, is to save the bees trouble. The object of the bee-keeper is to produce honey, not comb.... We have three honey crops in the year, and by ordinary care it is quite possible to keep them quite separate."

"Does the honey differ very much in flavor?"

"There is all the difference in the honey that there is in the flowers from which it comes. People sometimes seem to imagine that a bee is a kind of insect-cow, which browses upon flowers and converts the nectar into honey by a process somewhat analogous to that by which the cow converts grass into milk. A bee does no such thing. It simply taps the flowers, stores the nectar in its bag, and empties the unchanged nectar into the cells in the hive."....

"Honey in the comb we retail at Ontario for a shilling a pound. This is the finest white honey, and fully equal to that which is sold in your shops here at 2s. per pound. The extracted honey, which granulates and becomes, as you will see in our exhibit, as solid as butter, is sold at about 8d. per pound. There is no glucose or syrup in any of the Ontario honey. Our Association prides itself upon the purity of its produce, and offers a reward for the discovery of any adulteration. We are quite certain that it only needs that our honey be known for an extensive demand to be created, and we look forward with confidence to the result of the display of the products of our honey harvest in the Colonial Exhibition."

North American Bee-Keepers' Society.

REPORTS OF VICE-PRESIDENTS.

FLORIDA—FROM W. S. HART.

Bees here came through the winter in fine condition, but, notwithstanding that fact, 1886 has, without doubt, been the poorest year for honey that has been known in this State within the memory of the present inhabitants. In this part of the State (often called the bee-belt), where the greater portion of the State's crop is usually produced, there is, this year, no honey to ship; only enough having been produced to nicely carry the bees through to the harvest time of next season.

Bees commenced to work a little early in January on the maple; but on Jan. 9 to 11 we had the most severe cold snap that has been known for 51 years, and probably for considerable over a hundred, judging by the growth of mangrove killed at that time and still standing. This ruined our prospects for surplus white honey for the season, by killing the tops of most of the black mangrove trees, and of some of the roots also. Many still hoped to get some white honey from the cabbage palmetto, but as some apiarists questioned its honey producing qualities, it was watched with much interest. The bees work upon it and the mangrove at the same time, and as the latter could not give a crop this year, the season was a pretty good test. The cabbage tree bloomed very freely, and the bees gathered little but pollen from it, and stored no surplus honey. A few days after the freeze the bees were at work again upon the maple. Honey and pollen came in slowly the rest of the winter and spring.

The colonies bred up very rapidly, and by March 1 more honey was consumed by the brood than was coming in, so that in April many colonies had to be fed. Swarming commenced early in March, and continued until May, although much of the time honey came in so slowly that all new colonies had to be fed immediately. March and April are usually dry months, but this year proved to be very wet. May and June, usually showery, were so very dry as to ruin the crop from bay, gallberry, saw-palmetto, and those plants and trees that usually give us an early surplus.

Then came the time for our main crop of the season from mangrove, which usually lasts until about Aug. 10, but this year honey was so scarce in June, July, and August that a bee-tent had to be used when working with the bees, to prevent robbing. The fall flow has also been unusually small, and the bees unusually inclined to rob. Most of us have doubled back all weak colonies, so as to carry through only the best of our stock.

Only a few reports have come in from other portions of the State in response to my inquiries, but those received all speak of small crops. Southwest Florida makes the best report, a small crop having been gathered from the wild pennyroyal early in the season. A fair increase of colonies is also reported from there.

In conclusion I will say that much of the black mangrove is putting out finely and even showed considerable late bloom.

GEORGIA—FROM DR. J.P.H. BROWN.

The honey crop for the State of Georgia has been about an average. While the Georgia honey will compare in body and flavor with any produced in the United States, it is much darker color than the average of the Northern product. Honey here is more difficult to classify as to its source, as we have such a multitudinous variety of honey-producing plants.

Those bee-keepers who work their bees to the best advantage in frame hives, receive remunerative returns for the labor and capital invested. The bulk of the crop is sold at home, and near markets, and I am not aware of any shipments to Northern or Western markets being made. Most of the honey is taken to market in the comb, and that which is in nice one and two pound sections sells for fully 50 per cent. more than the ordinary comb honey offered by the old box-hive bee-keepers in buckets and tubs.

During the past year the bee-keeping industry has about held its own in the State—if any move has been made, it has been on the side of progress and improvement in hives, appliances, and bees.

ILLINOIS—FROM MRS. L. HARRISON.

Bees passed the winter of 1885-86 with very little loss, and the spring will long

be remembered for its many genial and sunshiny days, so favorable for the development of young bees, and for the secretion of nectar.

Under these conditions, bees increased very rapidly, and hives were running over with bees when white clover bloomed. There were many cool nights during its blooming; yet the crop is a very fair average. As far as I have been able to ascertain, basswood never yields much in Illinois. The white clover bloom, with few exceptions, was followed by a severe and prolonged drought, which cut short fall flowers, and only half a crop will be the result.

The intelligent management of bees is on the increase, and honey of good quality is abundant and cheap. The prayer of Father Langstroth, that every poor man might be able to have it on his table, is about to be answered.

INDIANA—FROM JONAS SCHOLL.

Bees wintered well in this State, and early spring found nearly all of our wide-awake bee-keepers with their full quota of colonies, and those colonies full to overflowing with bees ready to take advantage of the early flow of honey. The elm, willow, maple and sugar-tree gave more than the usual supply of honey and pollen. In short, the spring was very favorable for rapid building up of colonies, and bee-keepers were jubilant over the prospect of once more securing a full crop of honey. But in this they were again disappointed, for, as the season advanced, the weather was less favorable for the secretion of honey. Repeated heavy rains coming at the time when the flow of honey is usually best through the central part of the State, and drought in the northern sections, cut short the honey crop, on a general average, fully one-half. Yet this half crop will amount to 600,000 pounds in our State. The quality is excellent, and the bulk of our honey finds a market within the State, as our bee-keeping friends have learned, years ago, to build up a home demand for their surplus.

Our main source of honey is white clover, with basswood north of the centre of the State. The yellow poplar, or tulip timber, was once valuable as a source of honey, but it is now becoming so scarce that but little surplus can be obtained from it.

Indiana compares favorably with other States in the industry of bee-keeping and the production of honey. Her varied and fertile soil can perhaps be depended upon to produce the different kinds of clover, equal to if not better than that of any of the Central States; and while no particular locality can be said to produce enormous yields, yet through the entire length of the State, from Lake Michigan to the Ohio river, everywhere, with but few exceptions, can bees be kept with profit. In the very important matter of wintering, Indiana bee-keepers can report as good results, generally, as others in the same latitude. In fact many of them are completely successful in carrying their bees through the winter. Statistics give the number of colonies within the State at about 80,000.

MICHIGAN—FROM PROF. COOK.

The season in most of Michigan has been characterized by a very severe and long continued drought. Notwithstanding this I think the honey product of the State is fully 75 per cent. of an average. With us here it is fully an average. We find drought and nectar may be companions. With almost no rain in May and June, we had a fine white clover harvest, and quite an amount of basswood honey. The latter yield was cut short. Autumn rains have given us a fine crop of goldenrod honey. Two points I wish to emphasize: 1. The importance of Alsike clover, which, even with an abundance of

white clover, seems greatly to augment the June honey crop. 2. By the superiority of goldenrod among our fall flowers. These plants give much excellent honey.

I would add that, in my opinion, no one thing is more worthy the attention of bee-keepers than this matter of honey-plants. How often raspberry or Alsike clover make the honey harvest which otherwise would be nothing, or nearly so, quite satisfactory. May it not be that we could every year be sure of a crop, if we had plants like the Rocky Mountain bee-plant, or possibly the Chapman honey-plant, which, despite drouth or rains or cool days, would still secrete nectar in quantity? I doubt if any subject connected with bee-keeping is more worthy of attention.

PENNSYLVANIA—FROM A. TODD.

The spring opened in Pennsylvania with every prospect of a good yield of honey, but wet weather set in and continued with intermissions in such manner as to completely upset the anticipations of early spring. A short crop of honey is the result, as far as my knowledge reaches. The autumn has been more favorable, and bees will go into winter quarters in good condition. The consumption of honey is decidedly on the increase by the masses, forming the population of the city of Philadelphia, and on the whole; preference seems to be given to extracted honey.

I have to report the opening of a public apairy in the Zoological Gardens of this city (the first I think in the United States). Myself or a friend has, during each week, opened hives, explained bee-life, etc., to crowds of interested men, women and children. A photograph of this apairy will be mailed you herewith.

The use of honey in manufactures has occupied my attention, and honey candies, honey ice-cream, honey lemonade, and honey ginger ale, have been made and sold this season with a most gratifying result.

QUEBEC—FROM H. F. HUNT.

The past season has been under the average. The winter was comparatively mild with a good deal of rain during February. Spring opened early and warm; the months of May, June and July, however, were dry, and the nights rather cool, which interfered greatly with the secretion of nectar in the clovers and linden. Some bee-keepers report that they did not extract a pound of honey, bees having gathered just sufficient to carry them through the winter. The average of losses in winter appears to be 34 per cent. and of the crop gathered, 17 pounds per colony, spring count.

For the American Bee Journal.

St. Joseph, Mo., Bee and Honey Show.

J. W. GRAHAM.

The aparian display at the Inter-State Exposition, at St. Joseph, Mo., about Sept. 1, 1886, was the finest ever held in the State. There were twenty exhibitors in the aparian department, each striving to display not only his goods, but his ingenuity and skill in making them appear attractive.

Of bees, there were Carniolans, Syrians and Italians (imported and home-bred), as fine as the finest. There were 18 observatory hives; and the Kretschmer, Shuck, Armstrong and Heddon invertible hives. There were honey extractors, knives and foundation mills.

There was comb honey in crates, cases, and fancy forms; extracted

honey in a variety of tin and glass vessels, arranged for the light to shine through the glass, giving it a transparency not always attained; and a very neat display of wax moulded in the shape of pears, looking so natural that the judges passed them, thinking they were natural fruit.

The ladies had the honey-cakes, and there were some fine displays of honey-producing plants, and several displays of apicultural literature numbering over twenty bound volumes each, besides samples of bee-papers.

But there was one general wish expressed, and that was that the Editor of the AMERICAN BEE JOURNAL was here to see how his "child" had grown. Many will remember that in 1881 Mr. Thomas G. Newman paid us a visit, when this department was in its infancy, and by a series of lectures laid the foundation of our present apicultural structure, of which we today feel so proud; and no effort will be spared next fall to have him here to enjoy, with us, the fruits of our joint labors.

Agency, Mo.

The following is another account which was sent without signature:

Having been attracted to the St. Joseph, Mo., Inter-State Exposition, by the liberal premiums offered in the aparian department, aggregating over \$250, I desire to note the wide-awake, progressive spirit manifested by the officers and directors of this Exposition, as I expected that such liberal premiums would bring out a fine display of everything appertaining to this industry.

I was astonished at the "prodigious" display, the neat and attractive arrangement by the many exhibitors of products of their respective aparies, and the various implements used by them.

I will venture the assertion, however, that a finer exhibit was never made on this continent; and further, that no directors of any State, county or international association ever offered more liberal premiums, or provided for the requirements of exhibitors to as great an extent as did the officers of the St. Joseph Inter-State Exposition on this occasion. Nothing was asked of them (except space) that they did not grant. The number of exhibitors and their large displays was so far in excess of what was expected that a very considerable amount of honey was not unpacked. It was impossible to provide space to exhibit all that was intended for exhibition. Exhibitors from Illinois, Iowa, Nebraska, Kansas, Texas and Missouri were there with honey, both comb and extracted, in great abundance in very neat, attractive, and tasty packages. The comb honey was in half-pound, pound, and two-pound sections; nearly all in neat and handsome crates. There was on exhibition some few "caps" (starch or shoe boxes) taken from the old log gum. The extracted honey was in glass and tin pails, in bottles and jars of beautiful designs, holding from a half to three pounds; in kegs and tin cans holding from 25 to 100 pounds.

There was an elegant display of beeswax in a large number of different designs. Twelve entries were made for premiums on the best all-purpose hive, each of different design or pattern, showing that all bee-keepers are not as yet convinced that the Langstroth hive cannot be improved, or that the Heddon sectional hive is the *ne plus ultra*.

Several very handsome observatory hives (in full blast), showing the storing of honey, comb-building habits, and economy of a colony of bees, with drone and worker comb in with eggs, larvae and capped and hatching brood, queen-cells, etc., which called forth a great many expressions of astonishment and admiration. In fact no other department of this great Exposition was as attractive to the thousands of visitors.

Read at the Indianapolis Convention.

Feeding Bees for Winter.

JAS. M'NEILL.

In advocating the practice of feeding bees sugar syrup for winter stores, it may be well, in the first place, for me to consider some of the objections which are urged against the practice.

It is said that sugar feeding has a tendency to diminish confidence in the purity of honey. This is undoubtedly true. In many communities fully nine-tenths of the people believe that all extracted honey is adulterated. They have read that it is adulterated; nearly all with whom they talk are of the same opinion, and what is so generally accepted needs but slight evidence to be converted into absolute truth. When, therefore, such persons hear of a bee-keeper receiving a ton or more of sugar, and see him carting it through the streets to his apairy, they wink knowingly, smile self-complacently, and sagely remark: "That settles it."

Even a bee-keeper of well established reputation has enough to do to successfully combat the ignorant prejudice against his product without himself furnishing confirmatory proof against its purity. Nevertheless every thoroughly honest, self-respecting man feels that his manhood is degraded when he is called upon to forego what he thinks is a manifest advantage simply out of deference to the prejudice, ignorance and narrow-mindedness of his neighbors. He who sturdily pursues a straight-forward, manly course in the conduct of his business, is sure to gain the respect and esteem of his fellow-men; and though his pecuniary interests may suffer for a time because of ignorance and prejudice, in the long run his independent honesty will bear its legitimate fruit in increased honor and confidence.

Again, some bee-keepers object to sugar feeding because of a desire, which has in it something of the sentiment of fealty to our avocation, not to build up the sugar interests at the expense of the honey interests.

It is estimated that there are 3,000,000 colonies of bees in the United States, and that the annual yield of honey is 120,000,000 pounds. It is also estimated that 25 pounds of honey are required to winter a colony of bees. Now, if every bee-keeper should follow the practice of replacing this 25 pounds of honey with syrup, it is clear that the surplus honey of the country would be increased more than one-half, and that an already overburdened market would be still further depressed. Hence, the cry, "Do not elevate the sugar interests at the expense of the honey in-

terests," seems to have in it the ring of worthy fealty to the brotherhood of bee-keepers.

Let us, however, look at this matter from another stand-point. When we read the history of bee-keeping for the past 15 years, and reflect upon the great progress which the science has made, and the means by which this progress has been secured; how books and periodicals have multiplied through which every new idea has been spread abroad as soon as it was evolved; how the East has been traversed at great expense and discomfort for better races of bees; how queen-breeders have vied with one another in their efforts to produce the most prolific queens—bees with tongues long enough to reach the honey in any flower—bees that get up earlier, stay out later, work harder, live longer, winter better, and sting as little as possible; how supply dealers have multiplied, and flooded the land with their circulars;—when we reflect upon all these things, we marvel that some faithful friend of our chosen pursuit has not risen in solemn protest against this diffusion of knowledge, and this enlarging of our borders. For certainly this progress of which we boast, and in which we rejoice, has exactly the same tendency as sugar feeding, namely: to increase production and to diminish prices.

In this matter, then, of sugar feeding for winter stores, the chief question involved, according to my view, is one of dollars and cents. If bees winter better on sugar syrup than on honey, and if, all things considered, it is money in the pocket of the bee-keeper to feed syrup, then let all who so believe act upon their belief, undisturbed by any conscientious scruples concerning their want of fealty to our brotherhood.

But there are those who believe that syrup is no better than honey for wintering bees. It may not be better than some honey, but that it is better than the honey which is usually found in the brood-combs at the close of the season, I have not the slightest doubt. My own experience corroborates this view, and it is supported by the unequivocal testimony of some of our best bee-keepers. Others, again, claim that honey and sugar are so nearly equal in price that the sugar-feeder has all his labor for nothing. Let us see how this is.

The best granulated sugar in New York market is quoted at 6 to 6 1-3 cents. Clover honey is also quoted at 6 1-2 to 7 cents. For the sake of convenience we will call them both 6 cents at the apiary. According to my method of making syrup—2 pounds of sugar to one of water—the 25 pounds of syrup needed for each colony would cost one dollar, while the 25 pounds of honey would be worth \$1.50. Now I can make the syrup for 100 colonies, and feed them in three days; while the 2,500 pounds of honey would take me as long to extract. A saving of 50 cents on a hive would amount to \$50 on 100 hives; and this would represent the wages of a week's work; and there are few bee-keepers who would not be satisfied with such remuneration.

But some may say that syrup made in the proportion of 2 to 1 is not the equivalent of honey. Be that as it may, in my experience 25 or 30 pounds of syrup so made has always proved ample to carry a colony of bees through from September to fruit bloom, and that is the amount of honey which it is pretty well agreed is necessary to winter a colony out-of-doors. Feeders cost something, it is true, but the expense in that direction need not be more than \$5 or \$6 per hundred.

I will now give in detail my method of feeding. If the narration shall discover to my fellow bee-keepers any good points, or if it shall call out the good points in their methods, the chief objects of this paper will be accomplished.

I begin to prepare my bees for feeding about the middle of September. The

brood is usually then reduced to 3 or 4 frames. The bees are contracted to 6 frames, a chaff division-board being placed on each side of the frames. The amount of honey in the frames containing brood is carefully estimated, and the number of pounds which it falls short of 25 or 30, according to the strength of the colony, is marked on the corner of the cover. The amount of honey left in the hive usually runs from 2 to 5 pounds. This is enough to ensure the bees against starvation till I get around with my feeder. When the hives are all thus prepared, an empty body is placed upon each, and I am ready to commence feeding.

My feeder is an inexpensive affair, made of a gallon paint-pail and a tin pie-pan. These pails can be had for 2 or 3 cents apiece from the painters, and the pans, I believe, are worth \$3 per hundred. Two nicks are cut in the edge of the pails three-eighths of an inch in depth. These are to allow the syrup to flow out when the pail is inverted. Being filled with syrup, a pan is placed on the top of the pail and it is quickly inverted. The syrup is held in the pail by atmospheric pressure, while the nick in the pail allows the pan to remain about half full. These feeders are placed on the top of the frames inside the empty body, and the syrup, being close to the bees, is readily taken, even during cool nights.

I use the best granulated sugar in making my syrup. I have a boiler which holds 88 pounds of water, and a keg which holds 88 pounds of sugar. When the water reaches the boiling point it is poured into a barrel, and upon it are thrown two kegs of sugar. This is stirred till the sugar is thoroughly dissolved, when the syrup is drawn off into the feeding pails. These are then carried out and placed on the hives while they are yet quite warm.

By the time the pails are distributed another boiler of water is heated, and if we have pails enough, we may keep up our syrup making and feeding until every hive has a pailful. By the next morning the pails are emptied, and the operation is repeated until each hive has its amount.

My feeder would be improved by having a larger pail. One which would hold 13 pounds would, as a rule, supply the required amount to a colony at two feeds. Whereas, with my feeder, holding about 9 pounds, it is necessary to go over most colonies three times. But the larger pails would cost \$14 or \$15 per hundred, while the pails which I use cost comparatively nothing.

Read at the Indianapolis Convention.

Reversible Hives and Frames.

J. E. POND, JR.

The matter of reversible frames and hives is one that is to some extent engrossing the attention of the bee-fraternity, and I have chosen that topic, not that I feel that I can do the subject full justice, but that I may put myself squarely on record, so far as my views in regard to the matter are concerned; and you will please bear in mind that I state views and opinions only, and not in a dictatorial manner, and that I stand ready at all times to defend the position I have taken, without claiming that I alone am correct, and those who differ are in the wrong.

In the first place we are led to ask, what is the necessity for departing from nature's laws, and the well settled practice of ages? The only answer that I have as yet seen is, that by reversing frames we cause the honey they contain to be carried into the sections placed above them. If there is any other answer I have not seen it. Now this so-called advantage is more problematical than real, but the theory when first stated pos-

sessed enough plausibility to lead myself to accept it without testing, and give it my unqualified approval. The first tests I made, however, showed me its falsity, and I at once "reversed" my opinion and made public that reversal.

In practice, reversing frames is unnatural. So far as the method relates to sections it is of considerable value, and many of them that would otherwise be incomplete can be made perfect. It is true, also, that occasional poorly filled frames can be improved by reversing them; but so far will the plan go and no farther to advantage. It is unnatural, and further more, uneconomical. All the honey forced into sections by the process of reversing, is so forced at the expense of time and labor, caused by the removal; and this would be saved by causing the honey to be deposited in the sections when first gathered. Again, it is so forced at the expense of the life of the colony itself. The brood-nest is completely broken up, and the bees left in a terribly bad condition to withstand an inclement winter season.

I need not say that in order to get the best results, we must work in accordance with natural laws, and not give our bees an extra or unnecessary step to take, or amount of labor to perform; and it can at once be seen that when honey is first deposited in the bottoms of the frames, and then re-conveyed into sections, that extra time is used and extra labor done, unless it is assumed that the honey could not have been forced into the sections otherwise. Now I admit that he who finds fault without offering a substitute is entitled to no consideration whatever. I do not propose to be caught in that trap, and so I offer a substitute; one that is in direct accordance with the laws that govern the economy of the honey-bee and hive; one that is plain, simple and inexpensive, and one that works alike every time, and without a single failure.

One of the chief reasons why the frame hive has not been a complete success, so far as controlling swarming, and the getting of surplus placed where desired, is owing to the fact that we have not builded as well as we knew. We have known all the time that bees would not seal up brood in cells more than 7-16 of an inch deep. We have known also that they would not seal up stores in shallow cells, when they could find deep ones for that purpose. This in itself ought to indicate what is required; but it would seem that the remedy is so simple that it has not been applied. That remedy I have offered in the bee-papers, and I again offer it here and as follows:

Work the frames in the brood-chamber just seven-eighths of an inch thick, and just bee-space apart. By this means no cells will be built over 7-16 of an inch deep, and if sections with deep cells are given, nothing but brood will be deposited in the brood-chamber, so long as sufficient room for stores is given elsewhere. One of the recommendations this method has, is, that it requires nothing but what is found in every apiary. No new traps of any kind are required, and further, when the surplus crop is stored in sections, the brood-chamber will be found in the best possible condition for wintering.

In writing the above I have purposely refrained from going further than stating my position, in order that nothing but a topic for discussion may be presented. I trust that the subject will be ventilated, and I assure you that I have no "ax to grind" in presenting my ideas.

NOTE. The Patuxent Bee-Keepers' Association of Ala., request bee-keepers throughout the State, to meet delegates from this Association in Montgomery, Ala., on Nov. 3, 1886, for the purpose of forming a State association. The State Agricultural Fair will meet there on Nov. 8, and hold one week. Liberal premiums are offered to bee-men. Let me hear from every bee-keeper at once.

J. R. MCLENDON, Pres., Stoddard, Ala.

Local Convention Directory.

1886. *Time and place of Meeting.*
 Nov. 24, 25.—Illinois Central, at Mt. Sterling, Ills.
 J. M. Hambaugh, Sec., Spring, Ills.
 Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
 H. D. Cutting, Sec., Clinton, Mich.
 1887.
 Jan. 12.—Nebraska State, at Lincoln, Nebr.
 H. N. Patterson, Sec., Humboldt, Nebr.

[In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.]


**SELECTIONS FROM
OUR LETTER BOX**

Scent of Honey.—J. Chapman, (7), Woodville, Mich., on Oct. 11, 1886, writes:

I was somewhat surprised when I read Prof. Cook's answer to Query 313. I had always been told from boyhood that bees would scent their honey with peppermint when gathering nectar from that plant. In the year of 1884 I extracted 100 pounds from the hives in my apiary, that was nicely flavored with peppermint. The nectar was obtained from the peppermint plant growing along the creeks about a mile from my apiary—and no peppermint bottle concerned in the matter.

Infertile Queen.—Louis Werner, Edwardsville, Ills., on Oct. 19, 1886, says:

I send a queen that has not laid an egg in four months, and I wish that Prof. Cook would give her a trial test, for it is something that has never before come under my observation. She was hatched on June 25, 1886.

[As will be seen on page 77 of my "Bee-Keepers' Guide," I mention this as an occasional peculiarity of queen-bees, and comment upon it. That queen-bees should be occasionally infertile is no more surprising than that other animals, even to the highest, should be so. It is due to some abnormal or defective peculiarity of the queen's reproductive organs.—A. J. COOK.]

Bees Still at Work.—Mrs. O. T. Jackson, Sigourney, Iowa, on Oct. 20, 1886, writes:

We are having lovely weather for October, and very little frost yet; nearly every thing has the appearance of summer. The white clover is in bloom, and the bees are quite busy gathering honey from the red clover. On Oct. 12 I visited the apiary of Mr. Sears, of Thornburg, Iowa, 17 miles from here. He is a member of our State Association, and a practical bee-keeper. He has about 300 colonies, and his son, who is also an expert,

very kindly offered to show me through his apiary, honey-house, and the rows of beautiful honey. Joining this is his work-shop where he makes all his hives, frames, etc. I also saw the cellar where he winters his bees, and took notes of his manner of ventilation, etc. He is a reader of the BEE JOURNAL. Mr. Sears does not paint his hives, as he thinks that they retain moisture, and there is more dead bees in the spring in a hive that is painted than in one that is not painted. I would like to know whether Prof. Cook thinks it makes any difference.

Report for 1886.—W. M. Woodward, Custer, Ills., on Oct. 12, 1886, says:

The best honey flow of the season was from the yellow willow, and the honey is nice. It is losing the bitterness of the flavor with age. The white clover crop was prolonged, but slow and tedious, and gathered with much labor for both man and bees, but a fair crop was secured. Heart's-ease only yielded surplus honey about two weeks, and then slow, and the crop is light. All around we have perhaps a little over an average crop. My best colony of brown German bees gathered 190 pounds of comb honey in one-pound sections. My total crop was 1,400 pounds of comb honey and about 300 pounds of extracted honey from 17 colonies, and increased to 54 colonies, all in good condition for winter.

Malignant Foul Brood.—A. H. Noble, Nashville, Tenn., on Oct. 18, 1886, writes:

I purchased some 3 and 4 frame nuclei last spring and gave them empty combs. They built up rapidly, and did well during the honey flow of May and June, but since then they have been on the decline, gradually dwindling. Through my ignorance I supposed the queens were not doing their duty, therefore I commenced feeding them liberally, to "stimulate" the queens, as a bee-man would say. But all to no purpose. The queens looked fine, and I always found plenty of eggs in the cells, but they never hatched, became rotten, the grub turning to a brown,ropy substance, very offensive to the smell. It finally dawned upon me that it was foul brood. In fact I was pretty well satisfied that this was what ailed them. So in my helplessness I sent for a practical bee-friend of mine, who came over with his bound volumes of bee-papers, and proceeded at once to diagnose the case. The first hive we opened convinced him. Says he, "I would not have my apiary in this fix for \$500." But he could tell me nothing to do for it, but to destroy them all. Well, I have been reading up remedies ever since, and I concluded that I must do something. The disease has left them all more or less weak, so I have decided to unite them, making 2 strong colonies out of my 6 weak ones; for if they are curable, I can operate on 2 colonies better than I could 6. I

am now at "the end of my rope," and if any of the veterans in the business can suggest anything that will be of any service to me, I would be pleased to hear from them. There is no doubt that mine is a well developed case of malignant foul brood, corresponding precisely with all descriptions given of it. I have only 6 colonies, but if I am advised to destroy them, they shall go.

[The only safe way for an amateur is to destroy hive, bees, and all, at once. It is too dangerous for such to experiment with foul brood in its malignant form.—ED.]

Only Half a Crop.—H. L. Wells, Defiance, O., on Oct. 9, 1886, says:

I commenced last spring with 47 colonies, sold 3, doubled up the balance until I had 40 average colonies. I increased them to 100 colonies, and averaged 50 pounds per colony, spring count, 650 pounds of comb honey, the balance being extracted. Owing to the drought the honey-flow ceased three weeks sooner than usual. The basswood was a total failure here. To average up, there was not over a half crop in this section. I think I did the best of any one in this locality, but it took-hard work, and I did not let the bees lose a minute while the flow lasted. Besides the honey that I took off, I have an abundance to winter my 100 colonies without feeding a pound of sugar or anything else.

Bee-Keeping in Florida.—John Craycraft, Altoona, Fla., on Oct. 6, 1886, writes:

I find that I cannot keep bees without the AMERICAN BEE JOURNAL. Its scientific teachings apply to this climate if double-walled chaff hives and cellar wintering do not. Our winters here do not require such fixtures. I use a single-walled Simplicity hive, loose bottom-boards, and the best of tin roof, and all painted white. I also use 10 frames, $9\frac{1}{2} \times 13\frac{1}{2}$ inches. This size suits me and my methods and wants better than any other. I reared queens early in the season, then for comb and extracting, tiering them at times to four stories. For comb honey I use cases holding 18 one-pound sections, tiering them up as the bees progress in filling them, always placing the empty cases under the one partly filled. I work my frames close in the brood-chamber—ten frames in a space of 13 inches; but alone for extracting I use nine in the same space. I work all of my nuclei for rearing queens in the same size hives, only one story. When I double up I place the queenless colony over the one having the queen, leaving the enameled cloth between them, only turning up a little in one corner so that the bees will find their way below slowly. All will be right in a day or two. Very few bees will return to the old stand. The combs can be changed to suit the colony, and the cloth removed from between them on the third day.

Pleurisy-Root.—John Haskins, Empire Prairie, Mo., on Sept. 27, 1886, writes:

On page 552, Mr. Heddon gives a good description of the pleurisy-root as a honey-plant; but he is mistaken in thinking that it does not grow on the rich prairies. The prairie here is very rich, the soil is black, and the pleurisy-root grows all around here. It grows from 2 to 2½ feet high; one root here on the richest soil will probably keep hundreds, if not thousands, of bees busy daily for weeks, and if you wish them to bloom late in the season, just cut them off. The roots grow to a large size here. The seeds can be sown like cabbage seed. Try some this fall, and next spring when the plants are large enough, plant them in rows 3 to 4 feet each way. One thing Mr. H. did not speak of, is that it seems to furnish no pollen, or scarcely any for the bees. I send you some of the seed in this letter, and some of the pods in a package.

[Thanks for the seed and pods, which were duly received.—ED.]

Italians vs. Black Bees.—S. L. Watkins, Placerville, Calif., on Oct. 6, 1886, writes:

I increased my apiary from 4 colonies to 16, and took from 1 colony of Italians over 300 pounds of comb honey; from my best black colony about 80 pounds. My Italians have shown themselves so far ahead of the black bees that I will change them all to Italians next season. They are storing honey from the hartshorn, and the blacks are not doing anything. Our main honey-plant here is falacio, a small shrub about one foot high. It has a fern-shaped leaf, and a blossom something like a strawberry. It yields honey for about two months, and the honey from it is as good if not better than that from white clover. It is also very thick, and weighs about 11 pounds to the gallon. California lilac is a pretty good honey-plant, and the bees worked very hard on it this season.

My Report—Asters.—Otto Bussanmas, Bevington, Iowa, on Sept. 25, 1886, says:

In the fall of 1880 I obtained 7 weak colonies in all kinds of boxes and log gums. I lost all of them the following winter, but I was not discouraged. I then bought one colony in June, 1881, and by the fall of 1884, I had increased it to 33 colonies, but I lost like all other bee-keepers, and the balance (11 colonies) were very weak. I increased them to 31 colonies in 1885, and extracted 1,600 pounds of honey, and this year I have increased the 31 to 65 colonies, and harvested 3,400 pounds of white clover honey, and I think by the time I have all of my fall honey taken off, that it will be 1,200 or 1,600 pounds, besides leaving them from 35 to 45 pounds for winter. I do not believe in feeding sugar to bees and selling the honey. My bees are still busy. I went out

to-day to see what they could work on, and I was surprised to find them on white and red clover. I found three kinds of flowers on the bank of a creek not far away, where the bees worked as hard on them as if it had been linden or white clover. I will call them Nos. 1, 2 and 3. Will you please name them?

[Nos. 1 and 2 belong to the family of asters, and No. 3 to the mint family.—ED.]

Honey all Disposed of.—J. Meader, Delaware, Iowa, on Oct. 6, 1886, says:

I have endeavored to profit by the reading of the many valuable articles contained in the BEE JOURNAL from time to time. I have always tried to furnish my honey in the best condition possible. I have never had any one to find fault with my sales. My crop for this year is all sold at good prices. I have held all my old customers, and have gained many new ones. This can only be done by honest and fair dealing.

One of the Asters.—A Clendenin, Morrisonville, Ills., on Sept. 30, 1886, writes:

What is the name of the enclosed plant? My bees work on it from morning until night.

[It is one of the asters.—ED.]

Convention Notices.

The New York State, the Eastern New York and the New Jersey & Eastern Bee-Keepers' Associations will hold their great united convention at Albany, N. Y., on Jan. 18, 19, and 20, 1886. This convention will be one of the largest, if not THE largest, ever held anywhere in this country, and it behoves every bee-keeper to attend. A grand exhibit of aparian fixtures is promised. An unusually brilliant programme will be prepared and announced later.

The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, Sec.

The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ills., on Nov. 24 and 25, 1886.

J. M. HAMBAUGH, Sec.

The next meeting of the Bee-Keepers' Association of Hamilton and Tipton counties, Ind. will be held at Westfield, Ind., on Saturday, Nov. 6, 1886. The following interesting programme has been arranged: Opening exercises; Music; Address of welcome, H. Mills; Best method of wintering bees, D. Leaming; Discussion opened by Marion Moore; Best method of realizing the largest amount of profit on a colony of bees, M. Doherty; Discussion opened by Isaac Booth; Best method and time to prepare the bees for spring work, Zimri Kivett; Discussion opened by Dixon Bray; Question box. All interested in bee-keeping are invited to come, bringing their baskets well filled, so as to stay all day, and make this one of the most interesting and profitable sessions that the Association ever held.

The next annual meeting of the Nebraska State Bee-Keepers' Association will be held in Lincoln, Nebraska, on Wednesday, Jan. 12, 1887. Location of Hall to be used and Hotel accommodations will be given after further arrangements have been made.

H. N. PATTERSON, Sec.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Receipts are liberal and prices vary from 10@15c. per lb. for white in sections varying from 1 to 1½ and 1½ lbs. Many sales of good white 1-lb. sections are made at 11c. Extracted is quiet and ranging from 5@7c.

BEESWAX.—23@25c. R. A. BURNETT, Oct. 13. 161 South Water St.

NEW YORK.

HONEY.—We quote this year's crop as follows: Fancy white in 1-lb. sections, clean and neat packages, 15@16c.; 2-lbs., 12@13c.; fair to good 1-lbs., 12@14c.; 2-lbs., 10@11c.; sandy buckwheat 1-lbs., 11@12c.; 2-lbs., 9@10c. White clover extracted in kegs and small barrels, 6@7c.; California extracted in 5-lb. cans, 5@6c.; California comb honey, 10@11c.

BEESWAX.—Prime yellow, 22@24c.

MCAUL & HILDRETH BROS., 54 Hudson St.

BOSTON.

HONEY.—The demand has improved. We are selling one-pound packages of white clover honey at 14@15c.; 2-pounds at 13@14c.

BEESWAX.—25 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—Best white in 1-lb. sections, 12@13c.; dark, 10@11c., with a good supply in commission houses.

BEESWAX.—23c. Oct. 10. M. H. HUNT, Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is fair for choice comb in 1 and 2-lb. sections, which brings 12@15c. a pound in a jobbing way, according to quality and neatness of package. There is a fair retail and jobbing demand for extracted in square glass jars, while the order trade for dark grades from manufacturers is improving. Range of prices for extracted is 8@10c. per lb.

BEESWAX.—It is in good demand, and good yellow brings readily 20c.

Oct. 9. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice new honey in 1-lb. sections is selling at 14c.; 2-lbs., 12@13c. Old honey is very dull at 10@12c. Extracted, 6@7c.

BEESWAX.—25c. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—The market for honey of choice quality is firmer and we are trying to establish a higher range of prices. We quote 1-lb. sections of white, 12@14c.; 2-lbs., 11@12c.; dark not wanted. Extracted, white, in half barrels and in kegs, 6@7c.; in tins packages, 7@8c.; in barrels, as to quality, 5@6c.

BEESWAX.—No demand.

Oct. 2. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—There is a firmer market for extracted, and especially for comb honey, as the crop of the latter is rather small. Apiaries have sold what they were obliged to dispose of for payment of racks and labor, and they hold the balance back at higher prices. The demand is increasing, and we quote with ready takers, 4@4½c. for choice extracted; 3½@3¾c. for amber extracted; and 8@10c. for comb honey in 2-lb. sections; 12@13c. for 1-lb. sections.

BEESWAX.—It finds buyers at 20@23c.

Sept. 28. SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Trade is quiet. Extra white comb 11c.; amber, 7½@10c. Extracted, white, 4@4½c.; amber, 3½@4c.

BEESWAX.—20@23c.

Oct. 18. O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 11½@12½c.; latter price is for choice white clover. Strained, in barrels, 3½@4c. Extra fancy of bright color and in No. 1 packages, ½ advance on above prices. Extracted in barrels, 4@4½c.; in cans 6@7c.

BEESWAX.—Dull at 21c. for choice.

Oct. 21. D. G. TUTT & CO., Commercial St.

KANSAS CITY.

HONEY.—Demand for all grades is good, and sales are large. Receipts are good and prices are steady with a firm feeling. We quote: 1-lb. sections of white clover, 13@14c.; dark, 10@12c.; 2-lbs. white clover, 11@12c.; dark, 9@10c.; Calif. 2-lbs., 9@11c.; ½-lbs. white clover, 14@15c. Extracted white clover, 6@7c.; dark, 4@5c.; white sage, 5@6c.; Calif. amber, 5c.

BEESWAX.—20@22c.

Oct. 15. CLEMONS, CLOON & CO., cor. 4th & Walnut.

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To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

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The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case, has one-half of a regular bee-space, so that the surplus cases with the sections, may be placed between the two brood-chambers, or the latter may be transposed or inverted—in fact, all parts of this hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

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Those desiring the hives without the stand, honey-board or sections, may make the following deductions from the above prices: Stand, 14 cents; honey-board, 8 cents; and the 28 or 56 sections, as the case may be, at 1/4 cent each, respectively.

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